

ACAT

FEI Titan 80-300ST TEM/STEM

with

CEOS C_c/C_s Imaging Corrector

Instrument capabilities:

1. Instrument specifications:
 - a) Accelerating voltages: 80-300 kV
 - b) Schottky FEG emitter
 - c) Young's fringe information limits:
 - at 300 kV \approx 0.09 nm
 - at 200 kV \approx 0.08 nm
 - at 80 kV \approx 0.12 nm
2. TEM operating modes (all C_c/C_s-corrected):
HREM, energy-filtered imaging (EFI or EFTEM), CBED, SAED, EELS
3. STEM operating modes (not probe-corrected):
HAADF imaging, EELS spectrum imaging
4. On-axis CCD camera: 1 Mp, 12 bits, 24x24 mm chip size
5. EMC-owned specimen holders:
 - a) Double Tilt ($\pm 40^\circ \alpha$, $\pm 30^\circ \beta$):
 - room temperature
 - liquid nitrogen cooled (96 K)
 - heating (1270 K)
 - b) Tilt-rotate ($\pm 40^\circ \alpha$, $\pm 270^\circ R$)
 - c) Tomography (tilt $\pm 90^\circ \alpha$)



Typical experiments (examples):

- Aberration-corrected high resolution imaging
- High spatial resolution EFI